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A New Species in the Genus *Amerocnemis* (Hymenoptera: Psammocharidae) from North America with a Key to the Males of the Americas and Photomicrographs of the Genitalia of the N.Sp.

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Banks erected the genus *Amerocnemis* for four South American species.

This genus is closely allied to *Priocnessus* and like that genus has a very large broad clypeus, but unlike that genus has the front margin of the clypeus only very slightly raised above the labrum, while *Priocnessus* has it raised very much above the labrum and the mouth parts. It is distinct from all the other genera of the *Cryptocheilinae* by reason of the elongate, narrow body, and superficially looks like the genus *Auplopus* (*Auplopodinae*) in the shape of the body but the species are much larger in size and the first abdominal segment has the sides straight and not hour-glass shaped. It also resembles *Poecilopompilus* (*Batazonus*) of the *Psammocharinae* by reason of the broad clypeus and by the light colored areas of the thorax of most of the species.

The species are long and narrow-bodied; claws toothed; no spines under last joint of posterior tarsi neither on ventral surface nor on the sides; spines at tip of front tibiae all of one size; clypeus very large, truncate in front and lying very close to the labrum; ocelli very large; labial and maxillary palpi slender; ocellar triangle is completely raised above the vertex; propodeum with the apex almost on a plane with the base and very hairy;

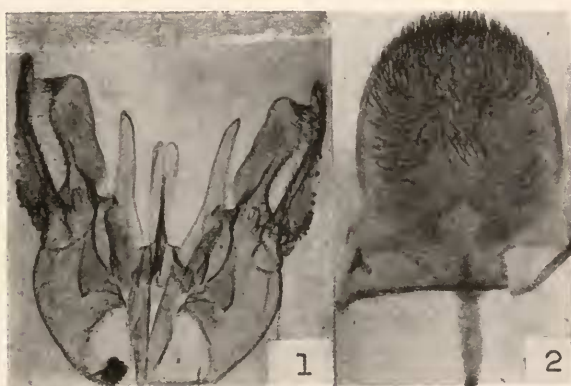
very few spines on the legs; wings very long and reach the tip of abdomen or are just short of the tip; basal vein basad of the transverse in the fore wings and like the genus *Priocnensus* the cubitus in rear wings meets the median vein before subdiscoidal; marginal cell very large and very long, its distance from wing tip is only about two-thirds of its length; the three cubital cells are very long, the third is shorter and broader than the others; the first recurrent vein meets the second cubital cell almost at the tip, and the second recurrent meets the third cubital cell before the middle. The first pair of claws are split in this genus.

All the previously described species have been from South America but in the Harvard collection there is a new species from Barro Colorado Island in the Canal Zone. The description of this species follows.

***Amerocnemis nigricans* n. sp.** Figs. 1, 2

Holotype male: Black, clypeus, face, inner orbits to above the antennae, front of first antennal joint, posterior edge and sides of pronotum, and tegula yellowish white, with the legs shading from black on femora to reddish on the tibiae and tarsi; head, thorax, and fore part of first two pair of coxae covered with long, loose, white hair, longest on the fore coxae, fore edge of pronotum and on the propodeum; a few long whitish hairs on first tergite, and a few scattered ones on the first four ventrites, with two heavy patches on the fifth and sixth ventrals, reminiscent of the genus *Anoplius*; under the long hairs of head and thorax are rather long closely appressed white hairs; clypeus is rather long, truncate in front and with a black spot in center; when seen from the side, the clypeus has a large bulge at base and slopes to front, the whole ocellar triangle is completely visible above the eyes, as well as the antennal fossae, eyes very wide, four to five times as wide as the posterior orbits; when seen from in front, the inner orbits are parallel, the antennae are located above clypeus by about two-thirds the length of first antennal joint, vertex level with the eyes, ocellar triangle entirely above the vertex; anterior ocellus less than one-half its diameter from the laterals and these slightly farther apart than

their distance to eye margin; a depression between each lateral ocellus and the eyes, and a sulcus in front of anterior ocellus which becomes a line as it approaches the antennal fossae; antennae reddish but slightly darker on dorsal, basal joints, with the second joint black; the first joint is yellow in front and black on the basal dorsal half, the front with a large bump; the first four and last two antennal joints have their respective lengths as 10:2:12:14:10:12; pronotum very short, transverse and about one-third of dorsal surface yellowish white; mesonotum with the side edges turned up as a ridge their whole length and



FIGS. 1, 2. *Amerocnemis nigricans* n. sp.

with a raised line each side inside this turned-up edge which fades out just before the posterior edge; propodeum very long and sloping very slightly with the apex on almost the same plane as the base; wings yellowish all over, veins and stigma honey-yellow; marginal cell exceedingly long as are the three cubital cells; marginal cell three times as long as its distance to wing tip; second and third cubital cells very long, of about the same length but the third much broader at base than at apex, second cell long and narrow; the comparative lengths of the three cubital cells on the cubitus are 40:35:35; the third intercubital vein is parallel to the second intercubital for its basal half and then bends forward toward the marginal vein; the second re-

current vein meets the third cubital cell at apical sixth, and the first recurrent meets the second cubital cell about basal third; basal vein is much basad of the transverse vein in fore wings and is bowed outward as in the genus *Halictus* in the bees, while the cubitus in rear wings meets the median before the subdiscoidal; abdomen long and black, slightly shining; fore coxae long and rather slender, second pair the shortest and thickest, while the third pair has a rather deep linear pit on the posterior surface; fore femora and tibiae very slender, the other two, pair much thicker and the tibiae much longer; fore tibiae with a few spines on sides and ventral surface, the last two pair with shorter but more numerous spines; tarsi with numerous fine spines the last joints of one and two with a few on ventral surface but the last pair with none; the claws of first pair are split, those of the last two pair with a large sharp tooth; the comparative lengths of the three tibiae are as 30:60:80; the ratio of the lengths of the joints of the last legs are as 70:80:60:30:20:10:20; longer spur of posterior tibiae is one-half as long as its metatarsal joint.

Length: head and thorax 7.30 mm., abdomen 9.9 mm., fore wing 14.5 mm., rear wing 11.25 mm., genitalia length 1.59 mm., width 1.19 mm., subgenital plate length 1.62 mm., width 1.00 mm.

Holotype male: Barro Colorado Is., CANAL ZONE, Nov. 7, M. Bates (MCZ).

The following key adopted from Banks' paper will separate the American forms in the males:

1. Pale reddish brown spot above antennae to ocelli; antennae with groups of three joints black and three yellowish; mesonotum with median pale stripe; abdomen not plainly banded. *longulus* Banks
1. Black mark above antennae and over ocelli; antennae largely black above if abdomen banded, antennae reddish above if abdomen not banded. 2
2. Whole vertex and front dark colored; abdomen entirely black pronotum with posterior border yellowish-white as well as the tips of the side of pronotum. *nigricans*, n. sp.
2. Abdomen banded, antennae dark above. 3

3. Abdomen with segments dark at base, pale across tip; mesonotum with large pale spot in middle, propodeum with large pale spot each side; hind femora dark above.
brasiliensis Banks
3. First and second abdominal segments not plainly banded; mesonotum with two pale lines, united behind; propodeum with an interrupted dark line each side; hind femora not dark above.
argentinica Banks

The type of the genus *A. bequaerti* Banks is the only female known and its male is unknown.

LITERATURE REFERENCE

BANKS, N. 1946. Bull. Mus. Comp. Zool. 96, No. 4, pp. 464, 499-503.

The Occurrence of Mass Flight Movements in *Hexagenia Occulta* (Ephemeroptera)

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For more than ten years, the writer has been deeply interested in the behavior pattern manifested in the order of mayflies. During this time several flight movements have been observed and the period of their greatest emergence recorded. In a previous investigation¹ a detailed description was presented on the mating flights of *Stenonema vicarium*, with particular reference to the life history of the nymph. In a later study,² involving the habits of *Isonychia christina*, it was revealed that a similar tendency toward shyness displayed in the performance of the adults found noteworthy expression in the behavior of the nymphs. Comments were also made with regards to the lofty height to which they frequently ascended which made observation possible only with the greatest degree of difficulty.

¹COOKE, HERMAN G. 1940. Observation on the mating flight of mayflies, *Stenonema vicarium*. Ent. News 51: 12.

²COOKE, HERMAN G. 1942. Mating flights of *Isonychia* mayflies (Ephemeroptera). Ent. News 53: 249.